

AlphaServer and AlphaStation systems summary

A complete family of open systems

AlphaServer and AlphaStation systems: They're Digital's commitment to open computing leadership through the nineties and beyond. Inspired by today's need for low-cost computing with tremendous power. Tomorrow's need to capitalize on more advanced information technology. And the long-term need to sustain a competitive advantage into the 21st century.



With AlphaServer and AlphaStation™ and AlphaStation™ products are available in a complete range of sizes, from workstations for your desktop to servers for your department or entire enterprise. All share the same 64-bit RISC technology and are based on the world's fastest microprocessor.

AlphaStation™ and AlphaStation™ products are available in a complete range of sizes, from workstations for your desktop to servers for your department or entire enterprise. All share the same 64-bit RISC technology and are based on the world's fastest microprocessor.

AlphaStation systems you can choose the operating system, peripherals, and software that best meet your needs. You can choose DEC OSF/1® for the best UNIX® operating system investment you can make. Open VMS for proven dependability for client/server applications. Windows NT™ for unprec-
edented Microsoft® Windows™ power and performance. Alpha AXP systems will support more than nine operating systems — so the choice is yours.

Imagine...Solutions that offer enduring value and that work for today and tomorrow...

Technology that opens the way for innovation by enabling you to take advantage of totally new ways of computing... Computing without boundaries that can actually change the way people and computers interact. The AlphaGeneration™ products from Digital Equipment Corporation put technology to work for you.

November 1994

ALPHA™
GENERATION

AlphaServer Comparison Chart



System

AlphaServer 1000 4/200
Workgroup Server

AlphaServer 2000 4/200
Workgroup Server

CPU features

Number of processors	1	Up to 2
----------------------	---	---------

CPU/clock speed	200 MHz	190 MHz
-----------------	---------	---------

Cache size (on chip/on board)	8 KB I-cache, 8 KB D-cache/2 MB per processor	8 KB I-cache, 8 KB D-cache/1 MB per processor
-------------------------------	---	---

In-cabinet CPU upgrade	Yes	Yes
------------------------	-----	-----

Performance

TPS	Up to 285	Up to 400
-----	-----------	-----------

SPECint92	135.8	126.7
-----------	-------	-------

SPECfp92	177.0	161.0
----------	-------	-------

SPECrate_int92	3.135	Up to 5,778
----------------	-------	-------------

SPECrate_fp92	4,299	Up to 7,279
---------------	-------	-------------

LINPACK 1000 × 1000 (DP MFLOPS)	—	Up to 208.6
---------------------------------	---	-------------

AIM rating	—	—
------------	---	---

AIM user load	—	—
---------------	---	---

I/O features

Maximum memory	512 MB	640 MB
----------------	--------	--------

Maximum disk capacity (in cabinet/total)	14 GB/168 GB	16 GB/200 GB
--	--------------	--------------

Maximum I/O bandwidth	132 MB/s	132 MB/s
-----------------------	----------	----------

I/O support (Maximum configuration)	2 PCI slots, 7 EISA slots, 1 PCI/EISA slot, Ethernet, Token Ring, FDDI, FWD, SCSI-2, Fast SCSI-2, RAID	3 PCI slots, 7 EISA slots, Fast SCSI-2, DSSI, RAID, Prestoserve
-------------------------------------	--	---

High availability features

VMcluster support (OpenVMS)	Ethernet, DSSI, FDDI	Ethernet, DSSI, FDDI
-----------------------------	----------------------	----------------------

AdvantageCluster (OSF/1)	Yes	Yes
--------------------------	-----	-----

High availability features	Thermal management, RAID, redundant power system, ECC cache, ECC memory, disk hot swap, UPS	Auto restart and reconfiguration, thermal management, RAID, ECC cache, ECC memory, redundant power system, disk hot swap, UPS
----------------------------	---	---

Software features

Operating systems	DEC OSF/1, OpenVMS AXP, Windows NT Server	DEC OSF/1, OpenVMS AXP, Windows NT Server
-------------------	---	---



AlphaServer 2100 4/200 CAB
AlphaServer 2100 4/275 CAB
Departmental Servers



AlphaServer 2100 4/275 CAB
AlphaServer 2100 4/275 CAB
Departmental Servers

Up to 4	Up to 4
190 MHz	275 MHz
8 KB I-cache, 8 KB D-cache/1 MB per processor	16 KB I-cache, 16 KB D-cache/4 MB per processor
Yes	Yes
Up to 660	Up to 850
126.7	200.1
161.0	288.8
Up to 11,113	Up to 15,470
Up to 13,025	Up to 25,996
Up to 358.1	Up to 642.7
Up to 310.6	-
Up to 2,552	-
2 GB	2 GB (1 GB for 4-CPU Model)
2100: 32 GB/200 GB	2100: 32 GB/200 GB
2100 CAB: 140 GB/300 GB	2100 CAB: 140 GB/300 GB
132 MB/s	132 MB/s
3 PCI slots, 8 EISA slots, Fast SCSI-2, RAID, Ethernet, FDDI, synchronous communications, DSSI, Prestoserve	3 PCI slots, 8 EISA slots, Fast SCSI-2, RAID, Ethernet, FDDI, synchronous communications, DSSI, Prestoserve
Ethernet, DSSI, FDDI	Ethernet, DSSI, FDDI
Yes	Yes
Auto restart and reconfiguration, thermal management, RAID, ECC memory, ECC cache, redundant power system, disk hot swap, UPS	Auto restart and reconfiguration, thermal management, RAID, ECC memory, ECC cache, redundant power system, disk hot swap, UPS
DEC OSF/1, OpenVMS AXP, Windows NT Server	DEC OSF/1, OpenVMS AXP, Windows NT Server



DEC 7000 Model 700 AXP Enterprise Server

System

CPU features

Up to 6	Number of processors
275 MHz	CPU/clock speed
16 KB I-cache, 16 KB D-cache/4 MB per processor	Cache size (on chip/on board)
Each system upgrades to any higher system within the series (VAX or AXP)	

Performance

Up to 1,350	TPS
200.9	SPECint92
292.6	SPECfp92
Up to 24,735	SPECrate_int92
Up to 40,103	SPECrate_fp92
Up to 961.7	LINPACK 1000 × 1000 (DP MFLOPS)
Up to 643.5	AIM rating
Up to 5,283.0	AIM user load

I/O features

14 GB	Maximum memory capacity
58.8 GB/Over 10 TB	Maximum disk capacity (in cabinet/total)
400 MB/s	Maximum I/O throughput
4 12-slot XMI, 1 9-slot Futurebus+, 10 CI, 24 DSSI, 32 Fast SCSI-2, FWD SCSI, * 16 Ethernet, 8 FDDI, 12 SDI, Prestoserve, IPI*	I/O support (Maximum configuration)

High availability features

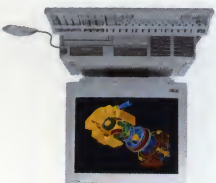
Yes	VMScaluster (Open VMS)
Yes	AdvantageCluster (OSF/1)
Disk shadowing, redundant power supplies, POLYCENTER Advanced File System, DECsafe ASE, integrated uninterruptible power system, integrated power conditioning	
ECC memory, RAID (levels 0, 1, 0+1, 5)	

Software features

DEC OSF/1, OpenVMS AXP	Operating systems
------------------------	-------------------

Performance is dependent on configuration, application, database, and operating system. Individual workloads should be carefully evaluated before making performance estimates for specific applications. In this chart, no warranty of system performance is expressed or implied. Details on configurations are found in the *Digital Systems and Options Catalog*.

AlphaStation Comparison Chart



System	DEC 3000 Model 300LX AXP and Model 300X AXP Low-Cost Workstations	AlphaStation 200 4/166 and AlphaStation 200 4/233 Desktop Workstations
--------	---	--

CPU features

CPU/clock speed	Model 300LX: 125 MHz Model 300X: 175 MHz	200 4/166: 166 MHz 200 4/233: 233 MHz
-----------------	---	--

Cache size (on chip/on board)	8 KB I-cache, 8 KB D-cache/256 KB	4/166: 8 KB I-cache, 8 KB D-cache/512 KB 4/233: 16 KB I-cache, 16 KB D-cache/512 KB
-------------------------------	-----------------------------------	--

Performance

	300LX	300X	4/166	4/233
--	-------	------	-------	-------

SPECint92	68.4	90.3	107.7	157.6
-----------	------	------	-------	-------

SPECfp92	77.7	101.9	134.8	183.8
----------	------	-------	-------	-------

SPECrate_int92	1,634	2,121	2,537	3,619
----------------	-------	-------	-------	-------

SPECrate_fp92	1,841	2,417	3,160	4,414
---------------	-------	-------	-------	-------

LINPACK 1000 × 1000 (DP MFLOPS)	62.9	80.1	93.8	122.0
---------------------------------	------	------	------	-------

I/O features

Maximum memory capacity	256 MB	192 MB
-------------------------	--------	--------

Maximum disk capacity (in cabinet/total)	4.2 GB/71.1 GB	3.15 GB/29.4 GB
--	----------------	-----------------

Maximum I/O throughput	50 MB/s	132 MB/s
------------------------	---------	----------

I/O support (Maximum configuration)	2-slot TURBOchannel, 1 SCSI-2, 4 Fast SCSI-2, Ethernet, FDDI, ISDN*	2 PCI/ISA slots, 1 ISA slot, SCSI-2, Ethernet, FDDI*, VME*, Token Ring*
-------------------------------------	---	---

Graphics and multimedia	HX, ZLX-Es, ZLX-L1, J300, voice-quality audio	Windows Sound System Compatible Audio, ZLXp-E1, ZLXp-E2*, ZLXp-E3*, DEC864
-------------------------	---	--

High availability features

Cluster support (OpenVMS)	Ethernet, FDDI	Ethernet, FDDI*
---------------------------	----------------	-----------------

Workstation Farms (OSF/1)	Ethernet, FDDI	Ethernet, FDDI*
---------------------------	----------------	-----------------

High availability features	Disk shadowing, POLYCENTER Advanced File System	Disk shadowing, POLYCENTER Advanced File System
----------------------------	---	---

Software features

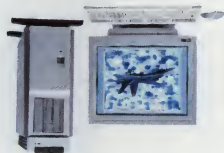
Operating systems	DEC OSF/1, OpenVMS AXP	DEC OSF/1, OpenVMS AXP, Windows NT Workstation
-------------------	------------------------	--

*Available with upcoming software or hardware release. Features may differ among operating systems.

Call us

For more information on the Alpha AXP family and Digital's many other products, please contact your local Digital representative or Authorized Business Partner. You may also receive information by calling Digital's InstaFACTS fax number: 800-DIGITAL (U.S. and Canada), or 1-908-885-6426 (outside the U.S. and Canada). For online information on ordering, products, and more, send mail to info@digital.com.

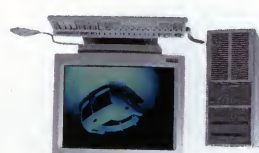
digital



DEC 3000 Model 900 AXP
Desktop Workstation



DEC 3000 Model 700 AXP
Desktop Workstation



AlphaStation 400 4/233 Mini-Tower
Workstation

233 MHz

225 MHz

275 MHz

16 KB I-cache, 16 KB D-cache/512 KB

16 KB I-cache, 16 KB D-cache/2 MB

16 KB I-cache, 16 KB D-cache/2 MB

157.6

162.6

189.3

183.8

230.6

264.1

3,619

3,944

4,702

4,414

5,482

6,293

192 MB

512 MB

1 GB

4.2 GB/29.4 GB

4.2 GB/77.6 GB

8.4 GB/170 GB

132 MB/s

100 MB/s

100 MB/s

2 PCI slots, 3 ISA slots, 1 PCI/ISA slot,

3-slot TURBOchannel, 6 Fast SCSI-2,

6-slot TURBOchannel, 12 Fast SCSI-2,

Fast SCSI-2, Ethernet, FDDI* VME* PrestoServe*,

Ethernet, FDDI, ISDN* PrestoServe,

Ethernet, FDDI, ISDN* PrestoServe,

Token Ring*

VME

VME

16-bit audio, ZLXp-E1, ZLXp-E2, ZLXp-E3,

ZLX-Bs, ZLX-L1, ZLX-M2, J300

ZLX-Bs, ZLX-L1, ZLX-M2, J300

DEC864

Voice-quality audio

Voice-quality audio

Ethernet, FDDI*

Ethernet, FDDI

Ethernet, FDDI

Ethernet, FDDI*

Ethernet, FDDI

Ethernet, FDDI

Disk shadowing, POLYCENTER

Disk shadowing, DEcSAFE ASE*

Disk shadowing, DEcSAFE ASE*,

Advanced File System

POLYCENTER Advanced File System

POLYCENTER Advanced File System

DEC OSF/1, OpenVMS AXP,

DEC OSF/1, OpenVMS AXP

DEC OSF/1, OpenVMS AXP

Windows NT Workstation

Digital believes the information in this publication is accurate as of its publication date; such information is subject to change without notice. Digital is not responsible for any inadvertent errors.

The following are trademarks of Digital Equipment Corporation: AdvantEdgeCluster, AXP, AlphaGeneration, the AlphaGeneration design, AlphaServer, AlphaStation, Alpha AXP, DEC, DECchip, DEcSAFE, Digital, the DIGITAL logo, DSSI, OpenVMS, POLYCENTER, TURBOchannel, VAXcluster, and VMS.

Third-party trademarks: AIM is a trademark of AIM Technology. Microsoft is a registered trademark and Windows NT are trademarks of Microsoft Corporation. OSF, OSF/1, and Motif are registered trademarks of the Open Software Foundation, Inc. PrestoServe is a registered trademark of Legato Systems, Inc. SPEC, SPECint92, SPECfp92, SPECrate, int92, and SPECrate_fp92 are registered trademarks of the Standard Performance Evaluation Corporation. UNIX is a registered trademark in the United States and other countries, licensed exclusively through X/Open Company, Ltd.